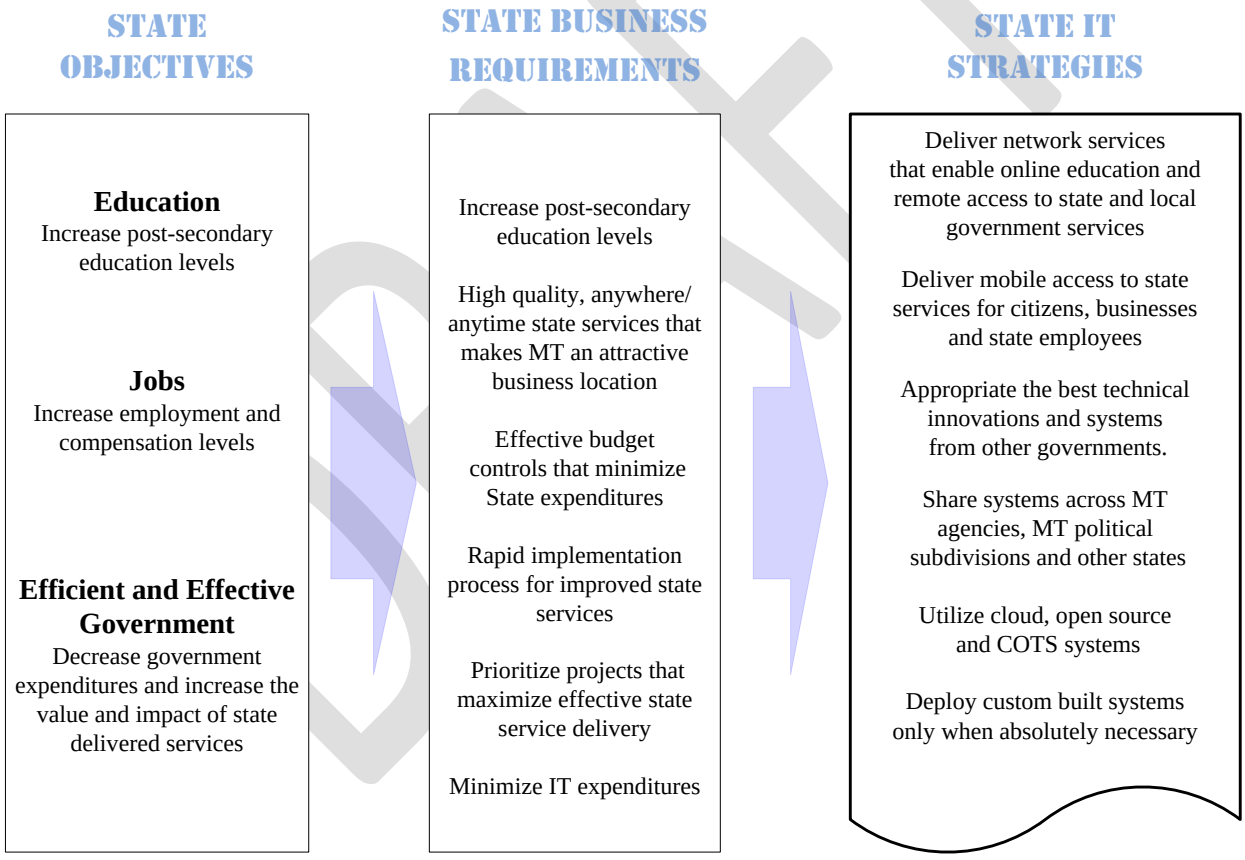
1. Executive Summary

Montana's enterprise IT strategy defines how IT will be used to contribute to Montana's success. Montana's IT Strategic Plan will slowly evolve over time as the State's objectives shift and technology changes. IT strategy changes will not be frequent. The State IT Strategic Plan guides IT investments, priorities, timetables and goals to ensure the state's IT investments provide the greatest value. The IT Strategic Plan will be updated to reflect changing circumstances and priorities, and reported to the legislature every two years.

Montana's IT strategies, listed in far right column, are a direct result of the state's primary objectives and the state's business requirements that support those objectives. Montana's IT strategies directly support the state's business requirements.



The state's portfolio of major IT projects and programs are the activities which make the IT strategies a reality. The major projects and programs are documented in the Montana Operations Plan. The Operations Plan will change frequently as agency and enterprise projects are completed and new projects and programs are launched.

2. State Environment, Success, and Capabilities

Montana weathered the recession better than the rest of the nation. Montana's unemployment rate has consistently outperformed other states, and the workforce shows high rates of educational attainment, income growth, and increasing job opportunities. In late June 2013 the Legislative Fiscal Division (LFD) projected almost a $300M ending general fund balance for the FY2015 biennium. Montana's economy is healthy, but there is room for improvement.

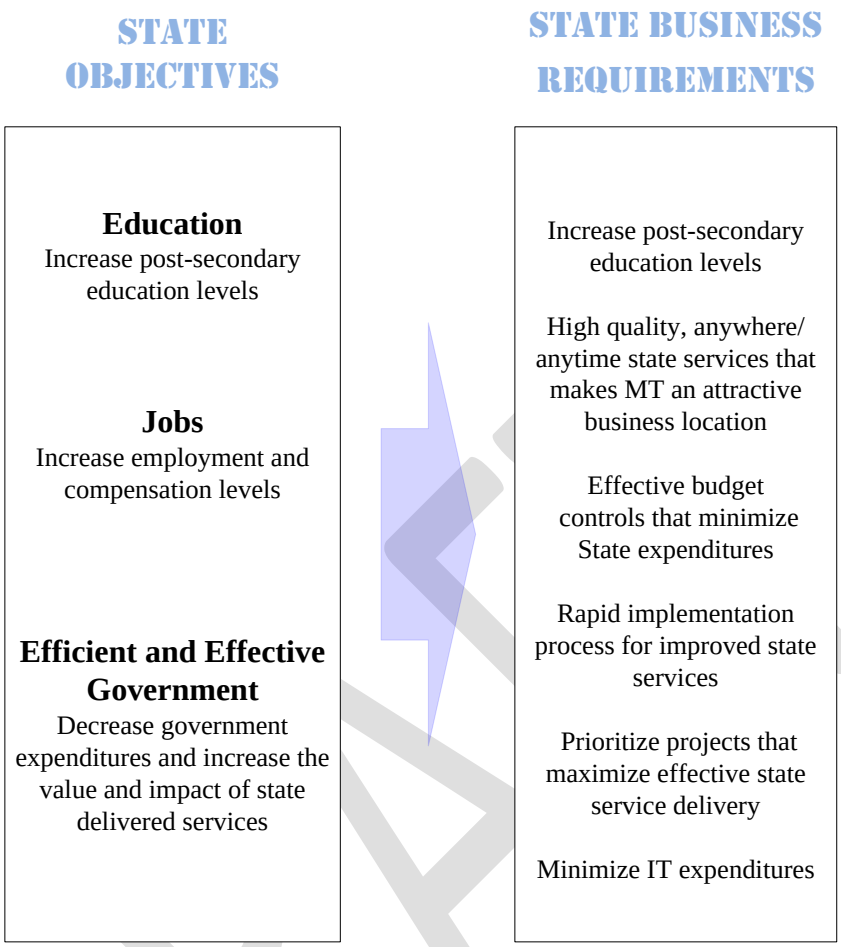
Technology strategic planning must be based on the needs and goals (business drivers) of the leaders that manage State programs and priorities. Those business drivers have been identified as jobs, education, and effective/efficient government.

- **Jobs** - Montana's objective is to ensure job growth and private sector wage growth exceeds the national average. Montana added 10,700 jobs in 2012, a growth rate of 2.3% which exceeded national job growth. Private sector wage growth in Montana increased by 4.2 percent in 2012; the second fastest wage growth in the nation. Additional details can be found in the 2013 Labor Day Report at: http://www.ourfactsyourfuture.org/admin/uploadedPublications/5314_LDR-13.pdf

- **Education** - Montana's objective is to increase the percent of Montana's population with a completed college certificate from 40% to 60% by 2020. Over the previous 3 years Montana led the nation with an increase of 37% to 40% in higher education credentials. Currently 96% of Montana's labor force has a high school; diploma, 4th in the nation.

- **Effective Government** - Effectiveness is the ability to produce better quality outcomes or higher value. IT can support this goal in two ways. First, by delivering value to state employees and programs. A $100,000 IT investment that saves a state agency $200,000 in personnel time or expenditures, or delivers $200,000 in citizen benefits would make the state more effective. Second, the state IT organizations can reduce their own internal IT costs; reducing them to minimum levels while maintaining high quality service. The state's objective is more effective government through both paths.

Montana's goals and objectives lead directly to several state business requirements; requirements that must be met if Montana is to succeed. The state business requirements are the focal points around which the state IT strategy is built.



3. IT Contribution and Strategies

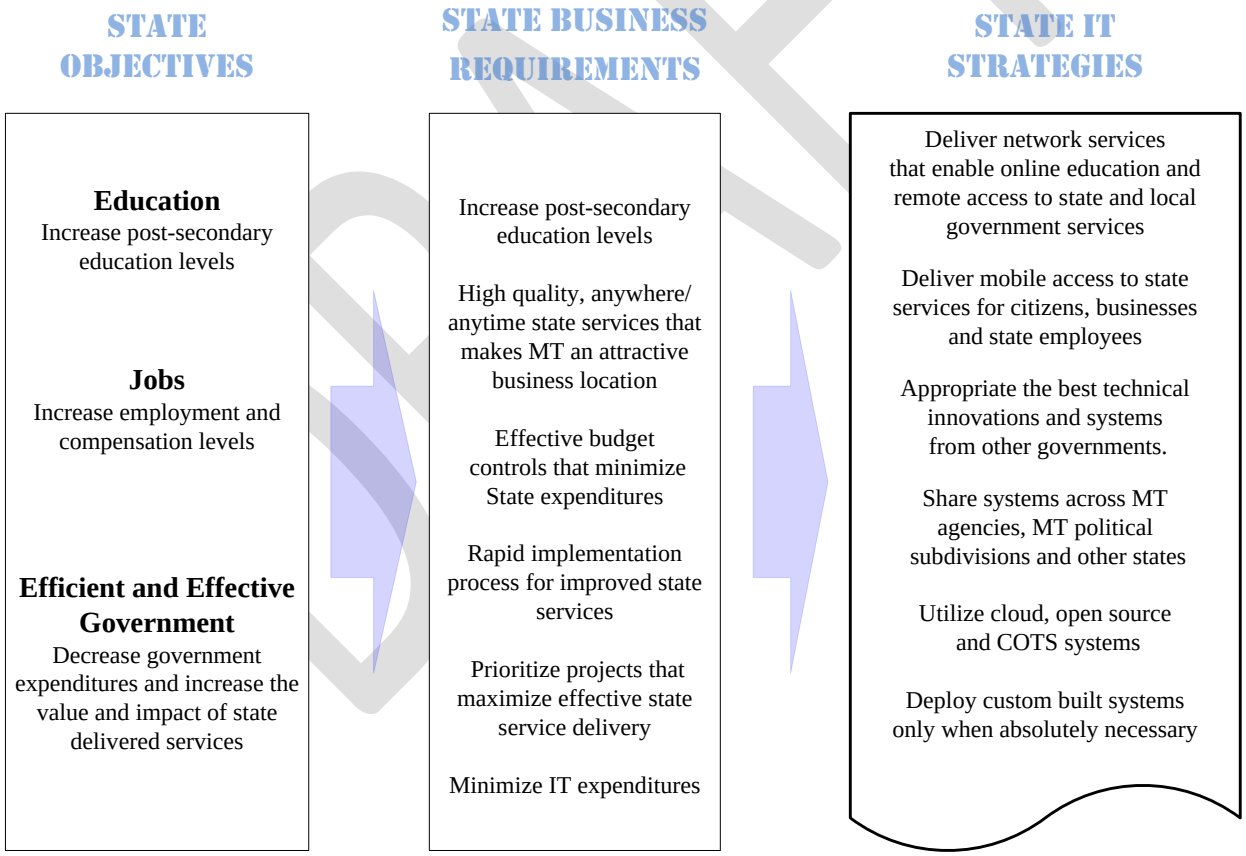
Montana's IT strategy is designed to support the state's primary strategies and business requirements. Not all IT programs and projects will address all of the business requirements, but all IT programs and projects will support at least one. Most IT programs and projects will focus of effective/efficient government. By its very nature a new or enhanced IT system will normally drive down agency operational costs or greatly enhance agency service or functions available to the public. Occasionally a new IT system will increase agency costs. This will be a conscious choice because the system benefits to state citizens and businesses far exceed the state's incremental IT costs.

Commerce, Labor and Industry, the Office of Public Instruction, and the University System will have a direct impact on Montana jobs and education. Other agencies will have a secondary impact. But all agency IT organizations will have a direct impact on delivering a more effective and efficient state

government. The IT services and systems they deliver will provide value by delivering faster, more informative state services to citizens and business and reducing the cost of agency operations.

Montana's IT strategy to contribute to Montana's success has 6 parts:

- Prioritize and allocate IT investments and resources to the projects and programs that deliver the most effective and efficient state government, improve jobs within Montana, and improve Montana education levels.
- Employ shared systems, cloud systems, and open source systems to reduce state IT expenditures.
- Deliver more effective and efficient state government by delivering mobile systems for citizens and state employees.
- Appropriate the best technical innovations and systems from other governments.
- Commercial, off the shelf systems will be preferred over custom built applications.
- Montana will deliver network services that enable online higher education and remote access to state and local government services.



Security is not listed as a specific state IT strategy because security is fundamental and inherent to all IT operations and systems.

4. IT Principles

IT principles govern the decisions and operations of the state's IT community. The provide touch-points and guidelines to ensure that the correct decisions are being made; decisions that will provide the greatest value to Montana's citizens. The majority of Montana's IT principles have their roots in MITA.

Montana's IT principles:

- Resources and funding will be allocated to the IT projects that contribute the greatest net value and benefit to Montana stakeholders.
- Unwarranted duplication will be minimized by sharing data, IT infrastructure, systems, applications and IT services.
- Montana will use shared inter-state systems to minimize IT expenditures, improve service delivery and accelerate service implementation.
- Information technology will be used to provide educational opportunities, create quality jobs, a favorable business climate, improve government, protect individual privacy and protect the privacy of IT information.
- IT resources will be used in an organized, deliberative and cost-effective manner.
- IT systems will provide delivery channels that allow citizens to determine when, where, and how they interact with state agencies.
- Mitigation of risks is a priority to protect individual privacy and the privacy of IT systems information.

5. IT Governance

The Montana Information Technology Act (MITA) is the primary authority for the division of IT governance responsibilities between the Department of Administration (DOA) and executive branch agencies. MITA creates a federated system, establishing the office of the Chief Information Officer (CIO) within DOA, and delegating specific duties to the department:

- IT planning and program responsibilities for the executive branch of state government
- Recommendations to the Office and Budget and Program Planning on IT budget requests
- Establishing IT policies, standards, procedures and guidelines
- Review the use of IT resources
- Review and approval of all state agency IT contracts
- Operate and maintain a central computer system and statewide telecommunications network.

The CIO and DOA have several advisory groups established through legislation, executive order and DOA Director order. The Information Technology Board is the largest advisory group with the broadest areas of interest.

- Information Technology Board (ITB) provides a forum to advise DOA on cooperative IT contracts, standards, policies, plans, budget requests, rates, exceptions and major projects.

- Information Technology Mangers Council (ITMC) is a group of 6 agency IT managers and a local government representative that advise the CIO on state IT policy, technology issues, and plans.
- The Electronic Government Advisory Council (eGov) advises on the creation, management and administration of electronic government services and information on the Internet.
- The Montana Land Information Advisory Council (MLIAC) advises on issues related to geographic information systems, land information, the priority of land information and data layers, the management of the Montana Land Information Act grant process and on the distribution of funds.
- The Statewide Interoperability Governing Board Executive (SIGB) directs the operation of the statewide public safety radio system as described in Montana's Homeland Security Strategic Plan and State Communications Interoperability Plan.

The CIO meets regularly with the Governor's cabinet, OBPP, individual agency directors, and with agency CIOs. Legislative oversight of executive branch IT activities comes from the Legislative Finance Committee (LFC), legislative hearings and testimony, interim committees and legislative audits. SITSD reports quarterly to the LFC on major IT projects, policies, standards, and exception requests.

Montana is creating a new IT cabinet-level governance body for IT Enterprise Management. The group will focus on managing the portfolio of enterprise-wide and agency systems and applications, with the objective of delivering both effective and efficient IT systems. One of the first steps will be an inventory of enterprise and agency specific applications.

IT governance within each agency is a function individual agency business practices. Agencies make internal decisions on IT staffing levels, project selection, funding levels, acquisitions and sourcing. Although state standards do exist for some software products, exceptions for specific agency requirements are common.

6. IT Financial Management

Agencies receive their IT expenditure authority from the legislature. IT funding sources include the state general fund, proprietary funds, fees, federal grants, etc. Most of the funding authority originates in an agency's biennial base budget with House Bill 10 providing supplemental capital funding for major IT projects and programs that cross biennium boundaries. IT line items in HB10 are managed by the Office of Budget and Program Planning (OBPP) with approval by the CIO.

SITSD is funded through a state proprietary fund. Each biennium SITSD develops a proposed portfolio of IT services and service rates with agency estimates of future service demand. The legislature approves SITSD rates as part of HB2. SITSD's rates are designed to recover 100% of the cost of service delivery and no more. The services and rates are published in SITSD's Service Catalog SITSD Service Catalog - default.mcpx. Agency customers are billed monthly for services. SITSD does occasionally

add, delete, and modify IT services during the biennium based on customer demand. SITSD's objective is to maintain 30 days of working capital.

Agencies make IT investment decisions on staffing, equipment, software, applications and systems independently. Agencies make sourcing decisions including decisions to develop services internally. Agencies are responsible for 100% of the state's IT expenditures and approximately 25% of those services are delivered by SITSD.

Occasionally the state IT organizations encounter system requirements that are too large or complex for any single agency to tackle independently. By mutual agreement the agencies and SITSD form a coalition to develop and acquire these systems for the enterprise as a whole. SITSD usually funds the system and agencies participate via a chargeback methodology.

7. IT Metrics

Montana's metrics and performance measures are designed to measure the State's progress against the IT strategies outlined in section 3, *IT Contribution and Strategy*. Montana must first establish its current baseline for each metric, and then measure progress over time. Reporting on progress against IT metrics will occur in the IT Biennial Report which is published at the start of each legislative session.

Montana's IT metrics:

- Effective /efficient state government
  - ✓ Percentage of IT projects that meet their original time, scope and budget objectives.
  - ✓ Percentage of IT projects that produce their quantified business objectives.
  - ✓ IT expenditures as a percentage of the State operational budget
  - ✓ IT spending per capita
  - ✓ IT spending per state employee
- Mobile access and services
  - ✓ Percentage of LFC reported IT projects and programs that provide mobile access to state employee users
  - ✓ Percentage of LFC reported IT projects and programs that provide mobile access to Montana citizens or businesses
- Shared IT systems
  - ✓ Percentage of LFC reported IT projects and programs that involve state employee users from 2 or more agencies
  - ✓ Percentage of LFC reported IT projects and programs that involve inter-state systems
- Security
  - ✓ Number of state computer system security breaches reported to the CISO
  - ✓ Number of citizens or businesses affected by all computer system security breaches

8. IT Services and Processes

Montana's agencies have hundreds of individual applications and services that support their programs and constituents. Describing the agency systems and applications, or even listing them, would be lengthy and most likely inappropriate considering their agency-specific scope. But it is possible to describe the few dozen enterprise-wide IT services delivered by SITSD. These enterprise services are consumed by agencies, the university system and local governments.

SITSD's service strategy is to offer a wide range of cost effective services from multiple providers that when viewed in aggregate, provide state agencies and local governments with attractive choices that can maximize support for their business processes while minimizing expenditures and resource investments. Cost effective shared IT services is the goal.

The scope of SITSD's service offerings is broad and very similar to peer states. Outside of a few isolated services such as fax, e-signatures, cell phones, and business analysis, SITSD's catalog of services is typical for a central state IT organization. SITSD's catalog of services includes:

- Network Services: data, voice, and video transport, internet access, LAN and wiring services, wireless, VPN
- Voice Services: voice mail, VOIP, Automatic Call Distribution (ACD), Interactive Voice Response (IVR), call recording, long distance, desktop equipment
- Hosting: servers, web servers, databases, storage and backup, applications mainframe, data center space and racks
- Professional Services: project Management, database management, desktop support and management
- Communications: email, instant messaging, audio and video conferencing, SharePoint collaboration
- Software Development: application development and web development
- EDM: document management/archiving, forms management, workflow, report management

In addition to the services above that SITSD charges to the agencies that consume the services, SITSD also offers a group of enterprise services that are handled differently. Enterprise services benefit the entire state and agencies reimburse SITSD based on the size of their IT operations, not on the quantity of service consumed. Enterprise services amount to roughly 15% of all SITSD services.

- Support for IT councils and advisory groups
- Strategic IT planning
- IT procurement and contract management
- Enterprise security and systems monitoring
- Oversight responsibilities from the Montana Information Technology Act
- State-wide continuity of operations program
- State telephone operators
- Website hosting for mt.gov
- Office of the CIO

SITSD also has a management, coordination and operations role in running the statewide public safety radio system; a trunked mobile radio system for state and local public safety officers.

9. IT Infrastructure, Staffing and Resources

Infrastructure

Montana has two primary data centers: the State of Montana Data Center (SMDC) in Helena and the Miles City Data Center (MCDC). MCDC operates as a backup and recovery site. Both sites are state-of-the art, and the SMDC is one of the most energy efficient datacenters in the country. The Department of Justice and Montana State Fund also maintain data centers in Helena. Most other agencies have moved their equipment into the SMDC.

The backbone of Montana's IT infrastructure is SummitNet, a secure consolidated voice, video and data network that supports approximately 22,000 devices at over 600 locations. The core network cities (Missoula, Helena, Bozeman, Billings and Miles City) are connected via physically redundant 10Gb/s links. Smaller sites are connected via 1Gb/s redundant links. The internet is accessible through Helena and Billings using diverse carriers. Standard remote site WAN access speeds are between 5Mb/s and 1.5Mb/s. Wireless A/B/G/N connectivity is also available in select locations. The State has implemented 802.1x Authentication across the complete enterprise network and successful authentication is required for network access.

IT Staffing

Montana has approximately 850 IT positions, 6.48% of all State FTE. The IT FTE numbers do not include accountants, HR, and clerical staff that work within agency IT organizations. Part time and temporary IT positions are rare.

(insert IT HR material)

As more state systems are migrated from on-premise systems to the cloud, the state will require additional technical skills necessary for implementing and managing cloud environments. We will also require additional skills in cloud contract management and cloud vendor management. These skills will have to be developed internally since cloud systems are relatively new and the state compensation rates will not attract highly skilled people with high-demand skills.

Resources

The executive branch invests approximately $170M annually in IT. SITSD and state agencies are heavily invested with Microsoft, Oracle, IBM, CISCO, and several telecommunication vendors. The state has an Enterprise Agreement with Microsoft that costs $3M annually. The state uses Microsoft's Office products on the desktop, SQL databases and Exchange email. Montana will spend approximately $12M in FY 2014 with telecommunication vendors.

10. Risks and Issues

All strategies have associated risks and potential problems. Risks may originate in the state's economic position, revenue constraints and environmental factors; or they may be the result of the current IT infrastructure, staff skill inventory, or IT strategy which is adopted. The following table lists the major risks to Montana's IT strategy. Mitigation strategies are the pro-active actions that the State will use to lessen the probability of the risk occurring and minimizing the impact of the risk.

Primary Risk	Probability	Impact	Mitigation Strategy
IT staff retirements	Certain	High	SITSD is developing a list of staff eligible to retire and forecast an estimated retirement date and replacement plan when possible. Each position/skills will be rated as critical or non-critical. Positions/skills rated as critical will have individual plans for skills transfer, replacement, documented procedures, etc. for mitigating the impact.
Security breach of the network.	Medium	High	*CISO statement*
IT project failure due to significant cost overrun, missed deadlines, failure to deliver planned function or service	High	High	The State has implemented a Project Management Office, routine oversight and regular reporting to the LFC.
Attracting and retaining qualified IT staff	High	High	XXXXXX